

CHAPTER 2

BACKGROUND

2-1. Requirements

Requirements are set forth in TM 5-691, Utility Systems Design Requirements for Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) Facilities, for the design of optimally reliable, self contained C4ISR utility systems and for the design of conventional power and other utility services. These utility services should be capable of supplying services continually to the C4ISR installation during all natural or man-made disruptions in commercial services. Potential disruptions include physical attacks, biological, chemical, and radiological warfare; as well as high and low altitude nuclear blasts.

2-2. Availability goal

TM 5-691 requires that each C4ISR utility system subsystem have a reliability/availability goal of 0.999999 when calculated using standard reliability techniques. Under certain assumptions this implies that each subsystem downtime will not exceed 32 seconds per year. This goal is of course contingent upon the determination of the using agency that a greater frequency of mission downtime is acceptable and therefore this goal would not apply to certain installations. Also the total reliability/availability of an installation would be dependant on the number of subsystems on site.